



**AIR POLLUTION CONTROL DISTRICT OF JEFFERSON COUNTY, KENTUCKY**

**TITLE V OPERATING PERMIT**

Permit No:	131-97-TV	Co/Plant ID:	1248
Effective Date:	17 December, 1999	Expiration Date:	17 December, 1999
UTM Northing:	4236.70	UTM Easting:	612.80
SIC:	4911	NAICS:	221112

Permission is hereby given by the Air Pollution Control District of Jefferson County to operate equipment located at:

**Louisville Gas & Electric, Zorn Generating Station  
3001 Upper River Road  
Louisville, Kentucky 40207**

in accordance with the permit application on file with the District and under the conditions in the permit. This permit and the authorization to operate the emission units listed shall expire on midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Applicant for Permit:	John N. Voyles, Jr.
Title of Applicant:	General Manager
Date Application Received:	22, April, 1997
Date Application Administratively Complete:	15 May, 1997
Date Public Notice Given:	17 October, 1999

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Reviewing Engineer (93)

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Air Pollution Control Officer

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**ABBREVIATIONS / ACRONYMS**

AC	- Additional Condition
APCD	- Air Pollution Control District
ASL	- Adjusted Significant Level
atm	- Atmosphere
BACT	- Best Available Control Technology
Btu	- British Thermal Unit
°C	- Degrees Centigrade
CEMS	- Continuous Emission Monitoring System
CAAA	- Clean Air Act Amendments (15 November 1990)
cf	- Cubic foot
DOE	- District Only Enforceable
°F	- Degrees Fahrenheit
gal	- Gallon
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- hour
lbs	- Pounds
l	- Liter
MACT	- Maximum Available Control Technology
m	- Meter
mg	- Milligram
mm	- Millimeter
MM	- Million
MOCS	- Management of Change System
NAICS	- North American Industrial Classification System
NSR	- New Source Review
NO <sub>x</sub>	- Nitrogen oxides
NSPS	- New Source Performance Standards
PM	- Particulate Matter
PM <sub>10</sub>	- Particulate matter less than 10 microns
ppm	- Parts per million
PSD	- Prevention of Significant Deterioration
PMP	- Preventive Maintenance Plan
psia	- Pounds per square inch absolute
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO <sub>2</sub>	- Sulfur dioxide
TAL	- Threshold Ambient Limit
TAP	- Toxic Air Pollutant
tpy	- Tons per year
VOC	- Volatile Organic Compound

### **GENERAL CONDITIONS PREAMBLE**

Title V of the Clean Air Act Amendments of 1990 required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Air Pollution Control District (APCDJC) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations".

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit general conditions define requirements which are generally applicable to all Title V companies under the jurisdiction of APCDJC. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the general conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The general conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The company's Title V permit may include a list of "insignificant activities" for informational purposes. By definition, "insignificant activities" identified by the company in its permit application and approved by the District are not subject to any applicable requirements, such as monitoring, recordkeeping, or reporting.

**GENERAL CONDITIONS**

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan. (Regulation 2.16, sections 4.1.3, 4.1.13.1 and 4.1.13.7)
2. **Compliance Certification** - The owner or operator shall certify, annually or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification directly to the following address as well as to the District, as set forth in Regulation 2.16, section 4.3.5.4:  
  

***US EPA - Region IV  
Air Enforcement Branch  
Atlanta Federal Center  
61 Forsyth Street  
Atlanta, GA 30303-8960***
3. **Compliance Schedule** - A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:
  - a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
  - b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.
4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, it shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

5. **Emergency Provision**

- a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (i) An emergency occurred and that the owner or operator can identify the cause of the emergency.
  - (ii) The permitted facility was at the time being properly operated.
  - (iii) During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.
  - (iv) The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- c. This condition is in addition to any emergency or upset provision contained in an applicable requirement.

(Regulation 2.16, sections 4.7.1 through 4.7.4)

- 6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. (Regulation 2.08, section 1.3)
- 7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.
- 8. **Enforceability Requirements** - Except for the conditions that are specifically designated as "District Only Enforceable Conditions", all terms and conditions of this permit, including any

provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. (Regulation 2.16, sections 4.2.1 and 4.2.2)

9. **Enforcement Action Defense**

- a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation.

(Regulation 2.16, sections 4.1.13.2 and 4.1.13.3)

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. (Regulation 2.16, section 4.1.13.6) If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA. (Regulation 2.07, section 10.2)

12. **Insignificant Activities** - The owner or operator shall notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. (Regulation 2.16, section 5)

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:

- a. Enter the premises to inspect any emissions-related activity or records required in this permit.
- b. Have access to and copy records required by this permit.
- c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.
- d. Sample or monitor substances or parameters to assure compliance with this permit or

any applicable requirements.  
(Regulation 2.16, section 4.3.2)

14. **Monitoring and Related Recordkeeping and Reporting Requirements** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be January 1st through June 30th and July 1st through December 31st of each calendar year. All reports shall be postmarked by the 60th day following the end of each reporting period. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes.
15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5.
16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.
17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, sections 2.3 and 5.4.
18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.
19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.
20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.
21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. (Regulation 2.16, section 4.1.16)
22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid



Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.

23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.
24. **Permit Revocation and Termination by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1.1 through 5.11.1.5. For purposes of Section 5, substantial or unresolved noncompliance includes, but is not limited to:
  - a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment.
  - b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District.
  - c. Knowingly making any false statement in any permit application.
  - d. Noncompliance with Regulation 1.07, section 4.2; or
  - e. Noncompliance with KRS Chapter 77.
25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.
26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.
27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.
28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.
29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.
30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.

31. **Risk Management Plan (112(r))** - For each process subject to Section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.
32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. (Regulation 2.16, section 4.1.12)
33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.
34. **Startups, Shutdowns, and Malfunctions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.
35. **Submittal of Reports, Data, Notifications, and Applications**
- a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.11.7 shall be submitted to:

*Air Pollution Control District of Jefferson County  
850 Barret Ave  
Louisville, KY 40204-1745*

- b. Documents which are specifically required to be submitted to EPA as set forth in Regulation 2.16 sections 3.3, and 5.8.5 shall be mailed to EPA at the following address:

*US EPA - Region IV  
APTMD - 12th floor  
Atlanta Federal Center  
61 Forsyth Street  
Atlanta, GA 30303-3104*

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following regulations:

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.01	General Application of Regulations and Standards

<b>FEDERALLY ENFORCEABLE REGULATIONS</b>	
<b>Regulation</b>	<b>Title</b>
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emission Standards and Maintenance Requirements
1.06	Source Self-Monitoring and Reporting
1.07	Emissions During Startups, Shutdowns, Malfunctions, and Emergencies
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Cause for Permit Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.01	General Provisions (for Hazardous Air Pollutants)
5.03	Potential Hazardous Emissions
6.01	General Provisions (for <i>Existing Affected Facilities</i> )
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (for <i>New Affected Facilities</i> )

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DISTRICT ONLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Emissions Fees, Permit Fees, and Permit Renewal Procedures
8.03	Commuter Vehicle Testing Requirements

Permit No. 131-97-TV

Co/Plant ID 1248

**Emission Unit Number** U1

**Emission Unit Description:** Combustion Turbine

**Emission Unit Allowable Emission:**

$\text{NO}_x < 100$  tons per year

**Emission Point E1 Component:**

One natural gas combustion turbine with a small bore cranking diesel engine; rated output of 19,400 kW (company designation GT1); and vented out stack (S1) installed in 1969.

## ADDITIONAL CONDITIONS

1. **NO<sub>x</sub> Emission Limit** (LG&E letter dated October 20, 1998) (Regulation 2.16, section 4.1.9.1.2)

The owner or operator shall not allow NO<sub>x</sub> emissions to equal or exceed 100 tons during any 12-month period. LG&E submitted a letter dated October 20, 1998, requesting a NO<sub>x</sub> limit of less than 100 tons per year. The owner or operator shall either calculate NO<sub>x</sub> based on an AP-42 emission factor and the following formulas:

$$E_{\text{NO}_x} = (0.44 \text{ lb/MMBtu})(1025 \text{ Btu/cf})(x \text{ MMcf})(1 \text{ ton}/2000 \text{ lb})$$

Where:  $E_{\text{NO}_x}$  = NO<sub>x</sub> emissions (tons) during a consecutive 12-month period

$x$  = the amount of natural gas combusted during a consecutive 12-month period

$$E_{\text{NO}_x} = (4.41 \text{ lb/MMBtu})(140,000 \text{ Btu/gal})(x \text{ gal})(1 \text{ ton}/2000 \text{ lb})$$

Where:  $E_{\text{NO}_x}$  = NO<sub>x</sub> emissions (tons) during a consecutive 12-month period

$x$  = the amount of diesel fuel combusted during a consecutive 12-month period

As an alternative to using published AP-42 fuel heat content factors, the owner or operator may use the average yearly heat content based on actual test data or vendor certified fuel data.

2. **Operating Restrictions** (Regulation 2.16, section 4.1.1)

The owner or operator shall not combust more than 443 MMcf of natural gas or 2.25 MMgal of diesel fuel per year or some combination thereof, that would allow NO<sub>x</sub> emissions to exceed 100 TPY during any consecutive 12-month period.

3. **Recordkeeping Requirements** (Regulation 2.16, sections 4.1.9.1.2 and 4.1.9.2)

The owner or operator shall monitor and maintain monthly records of the amount and type of fuel combusted at this site when equipment is operated to demonstrate ongoing compliance with the annual limit for NO<sub>x</sub> emissions.

4. **Reporting Requirements** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual reports. The annual emission inventory may count as the second semi-annual report. All reports shall be certified by a responsible official as defined in District Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each 4 (c) and (d). The owner or operator shall report semi-annually the following:

For Emission points E1:

- (a) Emission Unit ID number and Emission point ID number
- (b) The beginning and ending date of the reporting period
- (c) Identification of all periods of exceedances of the NO<sub>x</sub> standard for the entire plant including the quantity of excess emissions
- (d) Fuel usage and type combusted. If the company exercises the alternative to AP-42, in Additional Condition #1, fuel analysis indicating the average annual heat content of the combusted fuels shall also be supplied.
- (e) Identification of all periods of exceedance of the fuel usage limit
- (f) Description of any corrective action taken for the exceedance

## PERMIT SHIELD

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all the conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance per District Regulation 2.16, section 4.6.1.1.

## ALTERNATIVE OPERATING SCENARIO

The company requested no alternative operating scenario in its Title V application.

## DISTRICT ONLY ENFORCEABLE CONDITIONS

There are no District only enforceable conditions applicable to this permitted source.

## INSIGNIFICANT ACTIVITIES

Description	Basis	Quantity
Pressurized Reservoir (contains 50/50 glycol-water )	Reg 2.02, section 2.3.26	1
Lube Oil Tank (vents only when system running)	Reg 2.02, section 2.3.9.2	1
Pressurized Fuel Oil Tank (with no vent )	Reg 2.02, section 2.3.26	1
Brazing, Soldering, or Welding Equipment	Reg 2.02, section 2.3.4	Various
Internal Combustion Engines	Reg 2.02, section 2. 2	Various
Emergency Relief Vents	Reg 2.02, section 2.3.10	Various